12. (Once Amended) [The method of claim 10,] A method of metallizing a substrate, comprising:

depositing a dual-purpose layer on the substrate;

electrochemically reducing oxides on the surface of the dual-purpose layer in an electrochemical reaction cell comprising an anode formed from a material that can be oxidized in the presence of the material comprising the dual-purpose layer;

electrochemically depositing a conductive interconnect layer on the surface of the dual-purpose layer; and

wherein the electrochemical reaction cell contains a first electrolyte comprising the cation of the material used to form the anode.

13. (Once Amended) The method of claim 12 [10], wherein the anode comprises titanium and the first electrolyte comprises titanium trichloride, titanium sulfate, titanium bromide, titanium trichloride, titanium iodide, titanium fluoride, or mixtures thereof.

16. (Once Amended) The method of claim 25 [15], wherein the electrochemically reducing step is performed in a first electrochemical reaction cell and the electrochemically depositing step is performed in a second electrochemical reaction cell.

17. (Once Amended) The method of claim 25 [15], wherein the electrochemically reducing step and the electrochemically depositing step are performed in a single electrochemical reaction cell.

18. (Once Amended) The method of claim 25 [15], wherein the electrochemical reducing step is performed using a first anode and the electrochemical depositing step is performed using a second anode.

19. (Once Amended) The method of claim 25 [15], wherein the electrochemical reducing step and the electrochemical depositing step are performed using a single anode.

20. (Once Amended) The method of claim 25 [15], wherein the dual-purpose layer comprises a material selected from the group consisting of tungsten, tungsten nitride, and tungsten-silicon nitride.

21. (Once Amended) The method of claim 25 [15], wherein the material comprising the dual-purpose layer comprises tungsten.

22. (Once Amended) The method of claim 25 [15], wherein the conductive interconnect material comprises copper.

23. (Once Amended) The method of claim 25 [15], wherein the first anode comprises a material that can be oxidized in the presence of the material comprising the dual-purpose layer.

24. (Once Amended) The method of claim 25 [15], wherein the first anode is formed from titanium or titanized platinum, platinum, or copper.

25. (Once Amended) [The method of claim 15,] A method of metallizing a substrate, comprising:

depositing a dual-purpose layer on the substrate;

electrochemically reducing oxides on the surface of the dual-purpose layer utilizing a first electrolyte in an electrochemical bath having an anode and a cathode;

electrochemically depositing a conductive interconnect layer on the surface of the dual-purpose layer utilizing a second electrolyte; and

wherein the first electrolyte contains the cationic species of the material comprising the first anode.

26. (Once Amended) [The method of claim 15,] A method of metallizing a substrate, comprising:

depositing a dual-purpose layer on the substrate;

electrochemically reducing oxides on the surface of the dual-purpose layer utilizing a first electrolyte;

electrochemically depositing a conductive interconnect layer on the surface of the dual-purpose layer utilizing a second electrolyte; and

wherein the first electrolyte comprises titanium sulfate, titanium bromide, titanium trichloride, titanium iodide, titanium fluoride, copper sulfate, or mixtures thereof.

27. (Once Amended) [The method of claim 15,] A method of metallizing a substrate, comprising:

depositing a dual-purpose layer on the substrate;

electrochemically reducing oxides on the surface of the dual-purpose layer utilizing a first electrolyte in an electrochemical cell having an anode;

electrochemically depositing a conductive interconnect layer on the surface of the dual-purpose layer utilizing a second electrolyte; and

wherein the first anode is formed from titanium and the first electrolyte is titanium chloride or titanium sulfate.

28. (Once Amended) The method of claim 25 [15], wherein a voltage of at least about 0.1 V and not more than about 1 V is applied during both the electrochemically reducing step and the electrochemically depositing step for a time period of from about 30 seconds to about 5 minutes.

29. (Once Amended) The method of claim 25 [15], wherein a current of from about 0.5 amps to about 10 amps and having a current density of from about 5 $mA/cm^2$ to about 25 $mA/cm^2$ is applied during both the electrochemically reducing step and the electrochemically depositing step.

30. (Once Amended) The method of claim 25 [15], wherein a current of from about 0.5 amps to about 10 amps and having a current density of from about 10 $mA/cm^2$ to about 15

$mA/cm^2$ is applied during both the electrochemically reducing step and the electrochemically depositing step.

31. (Once Amended) The method of claim 25 [15], wherein a current of from about 0.5 amps to about 10 amps and having a current density of about 12 $mA/cm^2$ is applied during both electrochemically reducing step and the electrochemically depositing step.

32. (Once Amended) [The method of claim 15,] A method of metallizing a substrate, comprising:

depositing a dual-purpose layer on the substrate;

electrochemically reducing oxides on the surface of the dual-purpose layer utilizing a first electrolyte;

electrochemically depositing a conductive interconnect layer on the surface of the dual-purpose layer utilizing a second electrolyte; and

wherein [at least one of the electrolytes] the first electrolyte comprises:

the cation of the material from which the conductive interconnect layer is made;

a complexing agent; and

a pH control agent.

43. (Once Amended) The method of claim 44 [42], wherein the dual-purpose layer comprises tungsten.

44. (Once Amended) [The method of claim 42,] A method of metallizing a substrate, comprising:

depositing a dual-purpose layer on the substrate;

electrochemically reducing oxides on the surface of the dual-purpose layer;

electrochemically depositing a conductive interconnect layer on the surface of the dual-purpose layer, wherein both the electrochemically reducing step and the electrochemically

depositing step are performed in a single electrochemical reaction cell utilizing a single electrolyte;

wherein the electrolyte comprises:

the cation of the material from which the conductive interconnect material is made;

a complexing agent; and

a pH control agent.

45. (Once Amended) [The method of claim 44,] A method of metallizing a substrate, comprising:

depositing a dual-purpose layer on the substrate;

electrochemically reducing oxides on the surface of the dual-purpose layer;

electrochemically depositing a conductive interconnect layer on the surface of the dual-purpose layer, wherein both the electrochemically reducing step and the electrochemically depositing step are performed in a single electrochemical reaction cell utilizing a single electrolyte;

wherein the electrolyte comprises:

the cation of the material from which the conductive interconnect material is made;

a complexing agent; and

a pH control agent; and

wherein the conductive interconnect material comprises copper and the electrolyte comprises copper sulfate.

47. (Once Amended) [The method of claim 44,] A method of metallizing a substrate, comprising:

depositing a dual-purpose layer on the substrate;

electrochemically reducing oxides on the surface of the dual-purpose layer;

electrochemically depositing a conductive interconnect layer on the surface of the dual-purpose layer, wherein both the electrochemically reducing step and the electrochemically

depositing step are performed in a single electrochemical reaction cell utilizing a single electrolyte;

wherein the electrolyte comprises:

the cation of the material from which the conductive interconnect material is made;

a complexing agent; and

a pH control agent; and

wherein the complexing agent is ethylene diamine tetra acetate.

54. (Once Amended) The method of claim 44 [42], wherein a voltage of at least about 0.1 V and not more than about 1 V is applied during both the electrochemically reducing step and the electrochemically depositing step for a time period of from about 30 seconds to about 5 minutes.

55. (Once Amended) The method of claim 44 [42], wherein a current of from about 0.5 amps to about 10 amps and having a current density of from about 5 $mA/cm^2$ to about 25 $mA/cm^2$ is applied during both the electrochemically reducing step and the electrochemically depositing step.

56. (Once Amended) The method of claim 44 [42], wherein a current of from about 0.5 amps to about 10 amps and having a current density of from about 10 $mA/cm^2$ to about 15 $mA/cm^2$ is applied during both the electrochemically reducing step and the electrochemically depositing step.

57. (Once Amended) The method of claim 44 [42], wherein a current of from about 0.5 amps to about 10 amps and having a current density of about 12 $mA/cm^2$ is applied during both the electrochemically reducing step and the electrochemically depositing step.